

Appln No. 09/653,261

Amdt date January 3, 2005

Reply to Office action of October 5, 2004

Amendments to the Drawings:

The attached sheet of drawings includes a replacement sheet showing changes to 14a. The attached 35 sheets of formal drawings, which includes the changes to Fig. 14a, replaces the original informal drawings as filed.

Attachment: Replacement Sheet
 Annotated Sheet Showing Changes

Appln No. 09/653,261

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REMARKS/ARGUMENTS

Claims 1-71 are pending. Claims 1, 2, 4, 7, 8, 10, 16-19, 21, 27, 30, 32, 36, 40, 46, 50, 52, 53, 55, 56, 58, 61, and 67 are amended.

Applicant has amended FIG. 14A to update the reference number to packetization engine to conform with the specification as well as FIG. 6. Specific support for the amendment can be found on page 16, line 27. Therefore, no new matter has been added.

Claims 1-7, 9-14, 16-18, 20-24, 32-35, 38-45, 52-58, 60-65, 67-69, and 71 are rejected under 35 U.S.C. 102(e) as being anticipated by Leong et al. (US 6,782,095 B1). Claims 8, 15, 19, 25-31, 36, 37, 46-51, 59, 66, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leong in view of Tulai (US 5,563,942 A). Claims 29 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leong in view of Novas et al. (US 5,325,425 A). In view of the above amendments and following remarks, Applicants respectfully submit that the application is in condition for allowance, therefore, reconsideration and allowance of the application are respectfully requested.

Amended independent claims 1, 40, and 52 include, among other limitations, "estimating a power of the signal to determine a power on state," "if in the power on state, estimating a frequency of the signal," and "generating an indicator if the estimated frequency of the signal satisfies a criteria." Applicants respectfully submit that Leong does not disclose the above limitations.

Appln No. 09/653,261

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Rather, Leong, in the cited text, describes a tone receiver including a spectral processor for analyzing the spectral characteristics of a signal to obtain frequency and amplitude information. This "operation requires large computational power and limits the system in its processing capability. Traditionally, the spectral properties of tones have been detected by means of a bank of bandpass filters, one for each possible frequency in the tone. This is shown in FIG. 2" (Col. 2, lines 46-51, emphasis added). Further, Leong teaches an alternative "technique that can also be commonly used is to analyze the spectral characteristics of the signals involves the computation of the Discrete Fourier Transform (DFT). Typically the DFTs are computed only at the frequencies of interest and result in an estimation of energy in the frequency domain. . . . Energy estimates obtained at this stage are propagated to the logical processing stage 112." (Col. 2, line 63 to col. 4, line 6, emphasis added).

There is no disclosure in Leong in any of the two alternative approaches about "estimating a power of the signal to determine a power on state," "if in the power on state, estimating a frequency of the signal," and "generating an indicator if the estimated frequency of the signal satisfies a criteria," as required by the amended independent claims 1, 40, and 52. The present invention uses a less computation intensive operation for "estimating a power of the signal to determine a power on state," and then "if in the power on state," estimates "a frequency of the signal." As a result, independent claims 1, 40, and 52 are not anticipated by Leong. Furthermore, by

Appln No. 09/653,261

Amdt date January 3, 2005

Reply to Office action of October 5, 2004

emphasizing that the disclosed approaches require "large computational power and limits the system in its processing capability," Leong teaches away from the recited limitation of "if in the power on state, estimating a frequency of the signal."

The amended independent claim 21 includes, among other limitations, "a signal processor to estimate a power of the signal to determine a power on state and if in the power on state, to estimate a frequency of the signal and generate an indicator if the estimated frequency of the signal satisfies a criteria." As described above, Leong does not disclose the above limitation. Therefore, claim 21 is also not anticipated by Leong.

Dependent claims 2-9, 22-26, 41-45, and 53-60 are all dependent, directly or indirectly from independent claims 1, 21, 40 and 52, respectively, and therefore include all the limitations of their base claims and additional limitations therein. Accordingly, these claims are also allowable for the same reason set forth hereinbefore as well as the additional limitations recited.

Amended independent claims 10, and 61 include, among other limitations, "estimating a power of each of the separated components to determine a power on state for each of the separated components," "if in the power on state, estimating a frequency for a respective separated components," and "selectively generating an indicator for those of the separated components whose estimated frequency satisfies a respective criteria." Amended independent claim 27 includes, among other

Appln No. 09/653,261

Amdt date January 3, 2005

Reply to Office action of October 5, 2004

limitations, "a plurality of power estimators each of which estimates a power for one of the components; a plurality of power state machines each of which determines a power on state for one of the components based on the estimated power for the one of the components; a plurality of differential detectors each of which estimates a frequency for one of the components; a plurality of frequency calculators each of which analysis a mean of the estimated frequency for one of the components and generates a tone indicator as a function of the analysis, wherein a respective frequency calculator analyzes the mean of the estimated frequency if the respective power state machine for the respective component is in the power on state."

Similalrly, amended independent claim 46 includes, among other limitations, "power estimation means for estimating a power of the signal to determine a power on state; analyzing means for selectively estimating a frequency of the signal if in the power on state, and generating an indicator if the estimated frequency of the signal satisfies a criteria." Again, Leong does not disclose the above limitations.

As explained above, Leong does not disclose "estimating a power . . . to determine a power on state," "if in the power on state, estimating a frequency," and "selectively generating an indicator for those of the separated components whose estimated frequency satisfies a respective criteria." Consequently, independent claims 10, and 61 are not anticipated by Leong. Amended claims 27 and 46 include similar limitations and thus are also not anticipated by Leong. Furthermore, by emphasizing that the disclosed approaches require "large computational power

Appln No. 09/653,261

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Reply to Office action of October 5, 2004

and limits the system in its processing capability," Leong teaches away from the recited limitation of "if in the power on state, estimating a frequency."

Dependent claims 11-20, 28-31, 47-51, and 62-71 are all dependent, directly or indirectly from independent claims 10, 27, 46, and 61, respectively, and therefore include all the limitations of their base claims and additional limitations therein. Accordingly, these claims are also allowable for the same reason set forth hereinbefore as well as the additional limitations recited.

Amended independent claim 32 includes, among other limitations, "a data exchange coupled to the telephony device, the data exchange comprising a signal processor to selectively analyze spectral content of the signal and generate an indicator if the spectral content of the signal satisfies a criteria, to estimate power of the signal and to generate a power indicator based on the power estimation, and to enable the spectral analysis based on the power indicator." Similarly, Leong does not disclose the above limitation.

First, as explained above, Leong does not describe estimating "power of the signal," generating "a power indicator based on the power estimation," and enabling "the spectral analysis based on the power indicator." In fact, by emphasizing that the disclosed approaches require "large computational power and limits the system in its processing capability," Leong teaches away from the above limitation. Second, Leong does not describe "a data exchange coupled to the telephony device." Rather, the tone transmitter 102 of Leong transmits an analog

Appln No. 09/653,261

Amdt date January 3, 2005

Reply to Office action of October 5, 2004

signal that is received by the tone receiver 100. Accordingly, claim 32 is also not anticipated by Leong.

Dependent claims 33-39 are all dependent, directly or indirectly from independent claim 32 and therefore include all the limitations of allowable claim 32 and additional limitations therein. Accordingly, these claims are also allowable for the same reason set forth hereinbefore as well as the additional limitations recited.

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,
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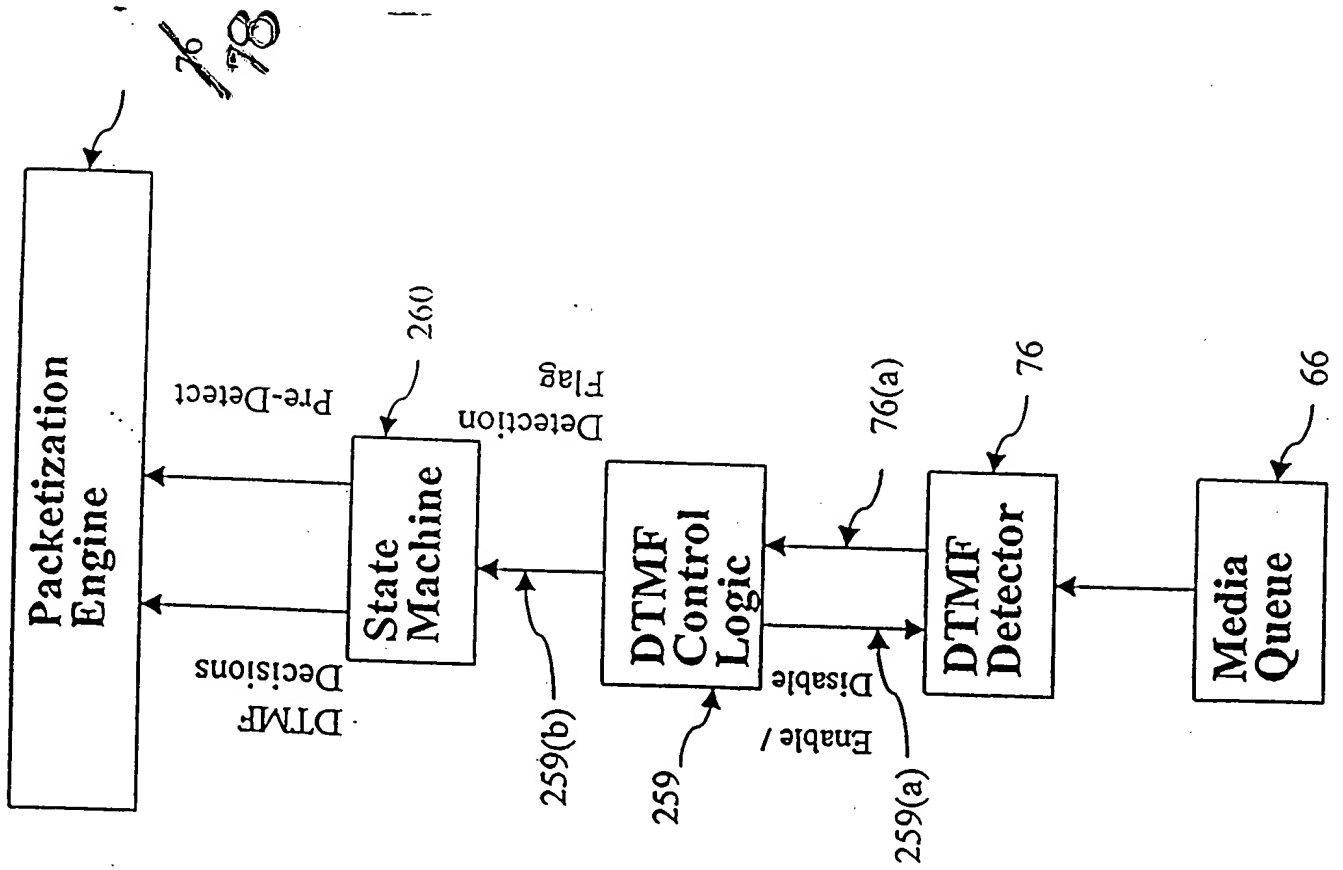


FIG. 14A